

TECHNICAL MANUAL  
[*SGML VERSION; SEE CHANGE  
RECORD*]

OPERATION AND SERVICE  
**TOASTER, ELECTRIC,  
POP-UP**

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**CHANGE RECORD**

<b>CHANGE NO.</b>	<b>DATE</b>	<b>TITLE AND/OR BRIEF DESCRIPTION/PREPARING ACTIVITY</b>

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## SAFETY SUMMARY

THE FOLLOWING ARE GENERAL SAFETY PRECAUTIONS THAT ARE NOT RELATED TO ANY SPECIFIC PROCEDURES AND THEREFORE DO NOT APPEAR ELSEWHERE IN THIS PUBLICATION. THESE ARE RECOMMENDED PRECAUTIONS THAT PERSONNEL MUST UNDERSTAND AND APPLY DURING MANY PHASES OF OPERATION MD MAINTENANCE.

KEEP AWAY FROM LIVE CIRCUITS. OPERATING PERSONNEL MUST AT ALL TIME OBSERVE ALL SAFETY REGULATIONS. DO NOT REPLACE COMPONENTS OR MAKE ADJUSTMENTS INSIDE THE EQUIPMENT WITH THE HIGH VOLTAGE SUPPLY TURNED ON.

**NOTE** DISCONNECT TOASTER FROM POWER SOURCE BEFORE ANY REPAIRS ARE MADE.

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### WARNING

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**DO ALL REPAIRS AND SETTINGS WITH POWER DISCONNECTED  
(Page 1-1)**

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### WARNING

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**DISCONNECT CURRENT SUPPLY BEFORE REPAIRING. (Page 1-4)**

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### CAUTION

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**IF YOU ARE CHANGING VOLTAGES. PLEASE NOTE IF METAL JUMPERS ARE BETWEEN #1-3 AND 2-4 TERMINALS. ALSO NOTE THE POSITION OF THE BLACK AND WHITE WIRES COMING OUT OF THE CENTER OF THE TERMINAL BOX. THESE WIRES CHANGE POSITION DEPENDING ON THE VOLTAGE. (Page 1-5)**

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### CAUTION

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**READ THIS BEFORE CONNECTING** Connect toaster with 10 GA. copper wire to main switch or fuse box. This toaster draws more amps than the ordinary line will carry. Under load, you must have 115 volts at toaster or it will toast too slow. Have your Power Company check, if you have difficulty. When this toaster is to be used on a 208 volt circuit, the standard elements furnished with the toaster should be exchanged for 104 volt elements (Page 1-6)



## CHAPTER 1

### INSTRUCTIONS:

MODEL BTM SERIES\*\*\*\* PLEASE READ BEFORE OPERATING TOASTER.

Each two-slice section in the four-slice model is separately controlled with individual mechanism and operating lever. Set adjustment knob about halfway between "Lighter and Darker." Drop bread in toasting wells. Press down front handle as far as it will go. This automatically lowers the bread, turns on the current and starts the timing. When the toast is finished it will pop-up and automatically turn off the current. If toast is too dark, move adjustor knob toward "Lighter" and toward "Darker" if toast is too light. Then try it spin with two fresh slices of bread. After you once determine correct setting, no further adjustments we necessary, unless different kinds of bread are used.

**CHECK LINE CAPACITY 4-SLICE TOASTER.** On the four-slice toaster, adjust each section independently with the other section turned off. After both sections are properly adjusted, and without changing the adjustments, make toast in both sections at the same time, if it takes longer and if the color of toast is lighter when both sections are operated at the same time, it is conclusive proof that the electric line supplying the current is not heavy enough to carry the load. In such cases larger wires are to be used to supply sufficient current to the toaster.

**BREAD RELEASE.** Avoid lifting the bread for inspection, while it is toasting. You start the timing cycle over again, when you do and your toast may burn. This toaster is automatic and will pop the bread up when the toast is finished. The manual bread release is for use in emergencies only.

Keep toaster clean and free of excessive crumbs. To remove crumbs, pull the tray out as far as it will go. brush off crumbs, then push tray in all the way. Crumb tray must be in place before toasting. If partially opened, it will disturb the proper timing.

**ADJUSTMENTS.** Should the toaster ever require adjustments or repairs, make certain that the party attempting them knows what he is doing. Never tamper with the thermostat timing mechanism. They are properly adjusted before leaving the factory.

**FOR BEST RESULTS USE GOOD BREAD.** To make good toast, bread should be at least several days old. Some breads will toast better if dropped in sideways or upside down. Different brands of bread will have various toasting qualities. Very fresh or moist bread of uneven texture will not make good toast under an circumstances. Bread that is not sliced evenly will not make good toast. Avoid the use of small unevenly cut slices. When using different kinds of bread-whole wheat, graham, raisin, etc., it may be necessary to change the timer adjustment to get the desired color. Sliced bread that has been opened will be dry on one side more than the other and it will toast darker on the dry side. **Do no use foreign objects to remove toast.** Doing so may cause damage to the elements.

MODEL BTM(CBT) SEQUENCE OF OPERATION & SERVICE INSTRUCTIONS #728

### **WARNING**

### **DO ALL REPAIRS AND SETTINGS WITH POWER DISCONNECTED**

- 1.) Winding handle is lowered, which causes winding mechanism to push down reset lever at point F.

SEE PART DRAWING FOR REFERRED TO NUMBERS AND LETTERS

- 2.) When completely wound, reset lever catches moon hook M at R and it also catches winding mechanism E at C. Space at C should be 1/32 to 1/16. If not, then bend E to the right or left. If too little space at C the toaster will pop-up too soon. If too much space at C toaster will not pop-up because it will get caught at point F after hook N releases.
- 3.) In the wound position, there should be approx. 1/32 space at point A contact. Bend at D to get proper space. Heater should heat and bend bimetal until heater arm trips 1st moon hook M and reset lever catches hook N. Toaster should not pop-up at this time. If it does IL means that reset lever is not catching N at R or that C is less than 1/32 to 1/16 (see #2 above). At this time space "A" should be closed and contacts be touching, if not, heater will not cool down. Bend at point D but not too much or on next cycle you will not have contacts open on first part of cycle.
- 4.) Heater will now cool and heater arm will move in reverse direction and cause moon hook N to release at R and mechanism will pop-up. If it does not pop-up, then something is binding or C is bent too far to right causing F to hit reset arm. Check space C.

### **ELEMENT REPLACEMENT.**

You can replace any ELEMENT by following these simple instructions:

- 1.) Disconnect toaster from electric power supply.
- 2.) Remove 2 screws on each side of toaster that holds the top on.
- 3.) Lift off top.
- 4.) Loosen, but, do not remove screw at back, at top of defective element.
- 5.) Lift out old element.
- 6.) Put in new element, keeping connection clip to top and back of toaster. This is the same position it was in when removed. Be sure bottom of element is in slot at bottom and element, is all the way down.
- 7.) Retighten screw holding element.
- 8.) Replace top.

**TO REPLACE TIME ADJUSTOR KNOB.** If you take the time adjustor knob off the threaded shaft or if you install a new timer complete, you must be sure the knob is put back in the correct position. It is done in this sequence:

- 1.) Insert the complete timer in the toaster and screw down with three screws, making sure the slot in the threaded shaft fits around, tab in timer bracket.
- 2.) With your hand or pliers, turn threaded shaft in counter-clockwise direction until it stops. Do not force turn past its natural stopping point. This puts the threaded shaft in "L" or light position.
- 3.) Now put on the time adjustor knob with the pointer on "L" or light side or the stop pin. Push on all the way until it rests almost against the toaster case, then tighten the set screw.

**FACTORY ADJUSTMENT SCREW COMPLETE TIMER REPLACEMENT.** When replacing the complete timer, you must check the sequence of operation form #T28 to be sure all settings or contacts and catches are correct.

This is the only time the factory adjustment screw may need adjustment.

For the correct setting, the factory adjustment screw should just clear the adjustor shoe by .001 to .010 when the toaster is cold . If the screw touches the shoe or if it is too far from the shoe when the toaster is cold, then turn the screw to bring into proper adjustment.

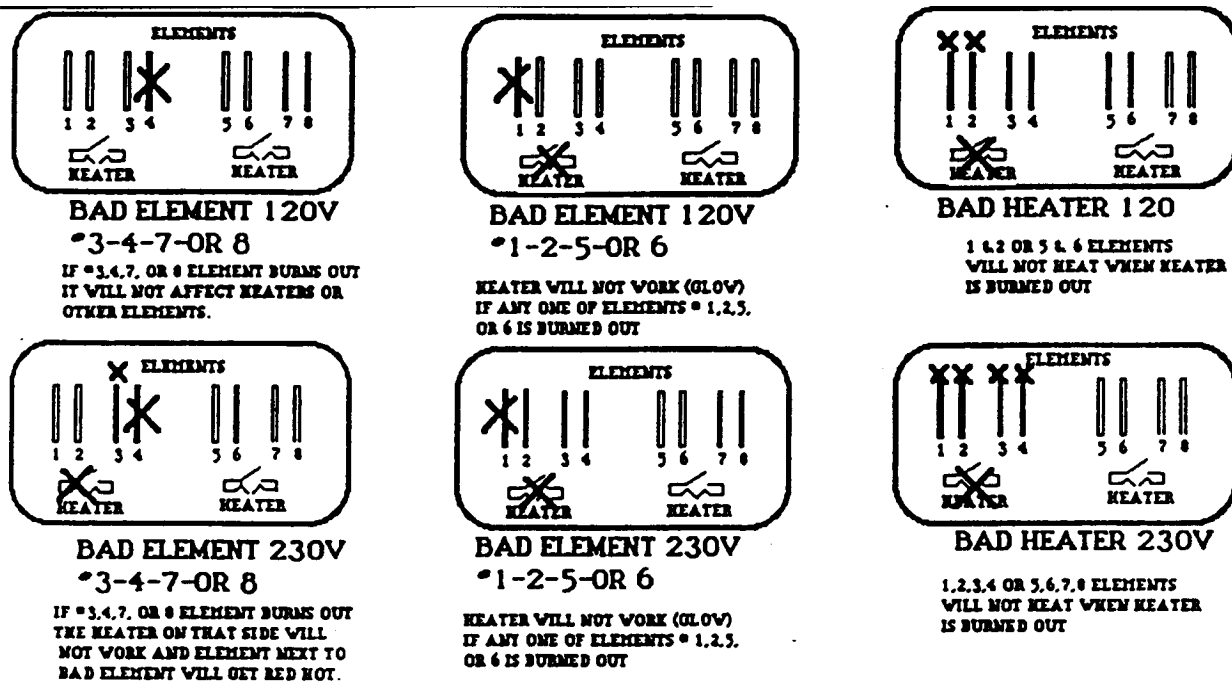
**TIMING TO LONG OR SHORT AND HEATER REPLACEMENT.** With toaster in wound position and dark and light knob set on light, the space 6 should be approx. 7/16 but never more than 1/2 and never low than 3/8. To adjust space G, you loom but do not remove screw J and insert end of screwdriver into K and twist to obtain desired setting. If properly set, the timing on lightset setting should be 55 to 75 seconds from a cold start.

**NO HEAT SETTING MAIN SWITCH #MT-88.** If toaster is wired correctly and heater is not burned out, the trouble may be that the main switch is not making contact with all 4 contacts. Look at [figure #5](#) and note that contact holder L must be parallel with fiberglass H. If not, bend bracket P very slightly in order to make parallel. Do all checking when wound. When in the wound position there should be approx. 1/32 space at B. This shows that there is a little pressure on contacts when wound.

## **TROUBLE-SHOOTING GUIDE AND PREVENTIVE MAINTENANCE**

**TO BE DONE ONLY BY A QUALIFIED PERSON. ALWAYS DISCONNECT FROM POWER SUPPLY BEFORE WORKING ON TOASTER.**

Troubleshooting Guide and Preventive Maintenance		
<u><b>TROUBLE</b></u>	<u><b>CAUSE</b></u>	<u><b>REMEDY</b></u>
Toast too slow	Overloaded circuit. Not enough power. Voltage too low. Toaster wired for 230V but hooked up to 120V or 208V.	Move to power line heavy enough to carry toaster. If in doubt have Electric Company check your outlet. Check wiring diagram.
No heat when handle pressed down, one or both sides.	Wired wrong or Fuse blown out or Main switch not making contact on all 4 contacts. On 208 or 230 heater, heater is burned out.	Check wiring diagram on terminal cover. Check form #T28 to set switch. Replace heater.
All elements work but toaster won't pop-up.	Shunt switch at point A not set properly. Not set properly at point 6. Pop-up spring broke.	Check form #T28 to set shunt switch. Check form #T28 to set point G.
Handle hard to push or pops-up part way	Oiless bushing is binding. Bread support bent.	Clean guide rod. Straighten bread support.



#### How to Spot Bad Elements and/or Heaters

**PREVENTATIVE MAINTENANCE.** Pull out crumb tray and wipe clean as needed. Install toaster so liquid or food is not spilled into toaster. No oiling required. Do not remove toast with fork or metal object. Do not butter bread before toasting.

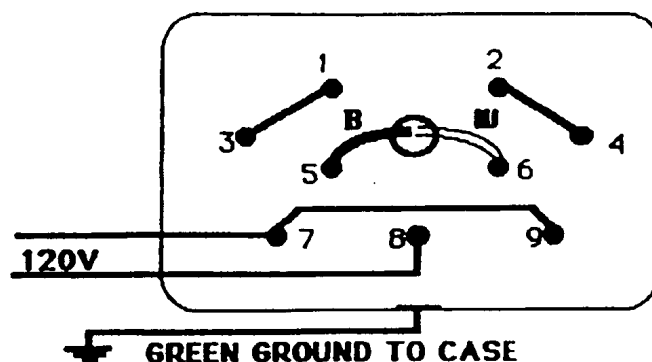
#### **WARNING**

#### **DISCONNECT CURRENT SUPPLY BEFORE REPAIRING.**

**WARRANTY.** Toastswell warrants to the purchase of each new Commercial appliance that any part which proves to be defective in material or workmanship within one year from the date of purchase, will be repaired or replaced free of charge. Any defect should be brought to the attention of the Toastswell Company, or a Toastswell designated Authorized Service Station, who will be authorized to furnish or arrange for repairs or replacements within the terms of this warranty, return transportation charges prepaid, to the factory or authorized service station. Toastswell Company neither assumes nor authorizes any person to assume for it any other obligation or liability in connection with such an appliance. This warranty does not apply, and no warranty either express or implied shall be applicable to the installation of appliance or damage resulting from accident, alteration, misuse or abuse. Before returning write factory first, giving nature of trouble, serial number, model number and voltage used on. We must have warranty card with 15 days, when appliance is first connected and used, otherwise warranty is void. Cord, plug and plastic parts carry no warranty.

#### WIRING DIGRAMS

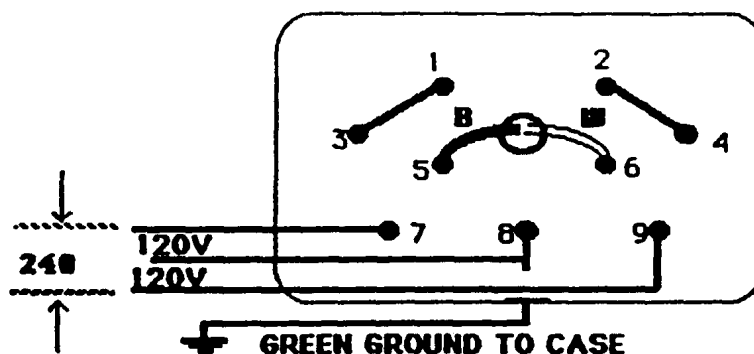
INSTRUCTIONS FOR MAKING FIELD CONNECTIONS CAT. BTM (CBT) FOR ALL VOLTAGES USE COPPER WIRE ONLY



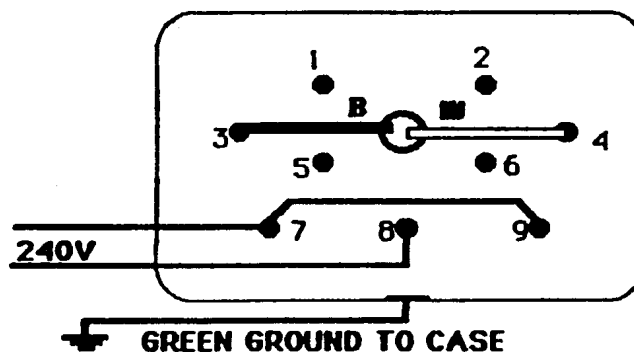
120V.2 Wire + Ground Accessory Cord #AP-15S Service Wire 10 GA Copper

### CAUTION

IF YOU ARE CHANGING VOLTAGES. PLEASE NOTE IF METAL JUMPERS ARE BETWEEN #1-3 AND 2-4 TERMINALS. ALSO NOTE THE POSITION OF THE BLACK AND WHITE WIRES COMING OUT OF THE CENTER OF THE TERMINAL BOX. THESE WIRES CHANGE POSITION DEPENDING ON THE VOLTAGE.



120/240 V. Single PH. 3 Wire + Ground Accessory Cord #AP20



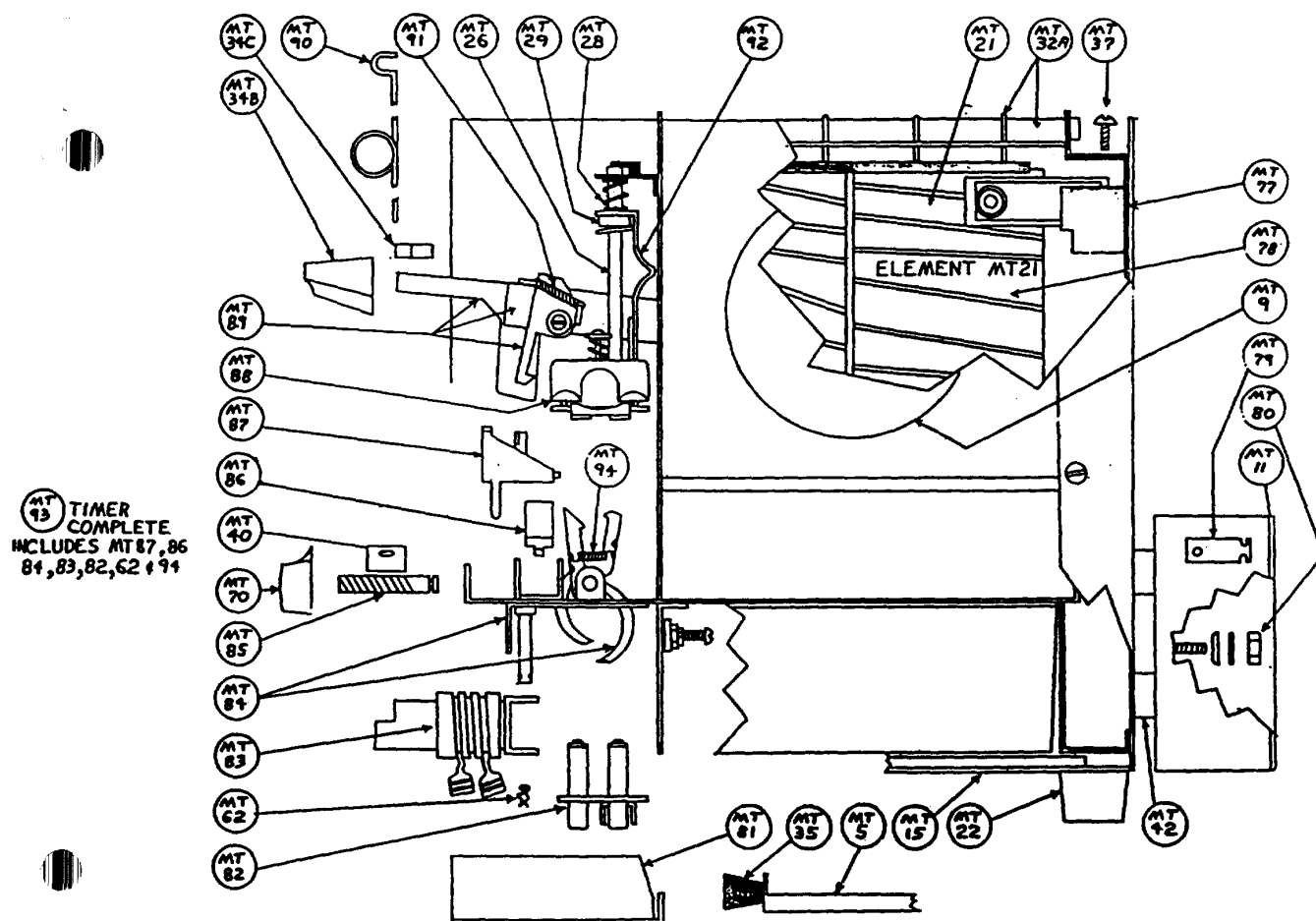
240V. 2 Wire + Ground Accessory Cord #AP15

### **CAUTION**

**READ THIS BEFORE CONNECTING** Connect toaster with 10 GA. copper wire to main switch or fuse box. This toaster draws more amps than the ordinary line will carry. Under load, you must have 115 volts at toaster or it will toast too slow. Have your Power Company check, if you have difficulty. When this toaster is to be used on a 208 volt circuit, the standard elements furnished with the toaster should be exchanged for 104 volt elements

**GROUNDING.** The toaster frame must be grounded. The center or neutral terminal in the Terminal Box (#8) is not grounded to the frame of the toaster. Make sure all connections are tight. Make ground connections to the screw located at the bottom of terminal box. Use a separated conductor for the ground connection. Do not use toaster neutral terminal for grounding. Use a 10, 12, or 14 ga. line (depending on voltage) as the power hook-up.

### **PART DRAWING**



Part Drawing

THE FOATSWELL CO.  
620 TOWER GROVE AVE. ST. LOUIS MO. 63110  
CAT. NO. 8TH(CBT) PART SHEET # 125  
WHEN ORDERING PARTS GIVE CAT. NO. PART  
NO. SERIAL NO.

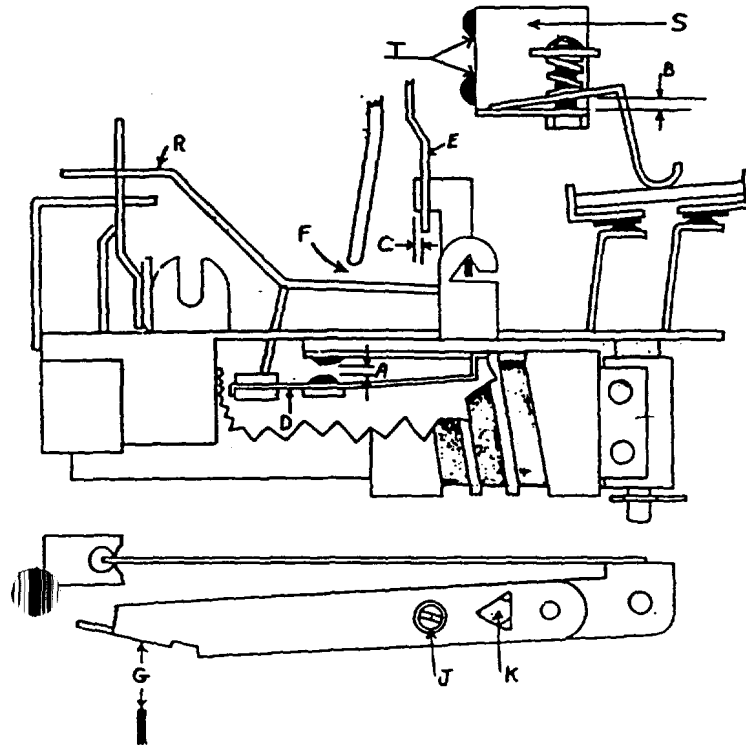


Figure 3

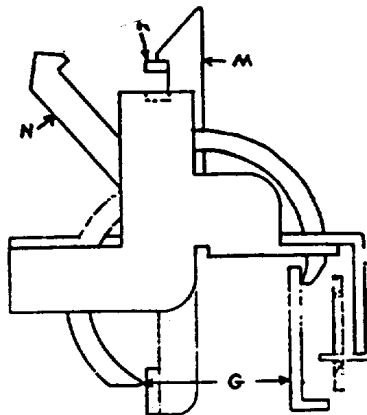


Figure 4



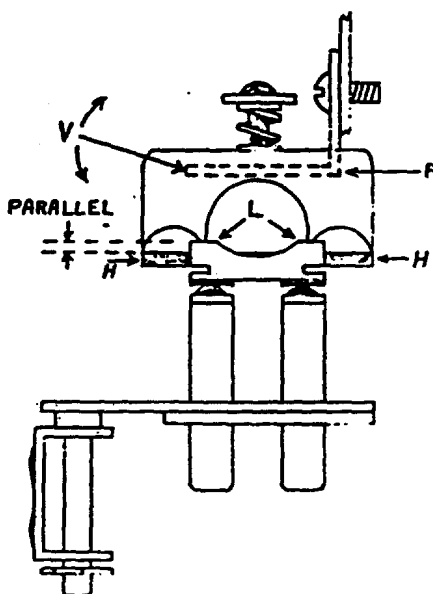


Figure 5

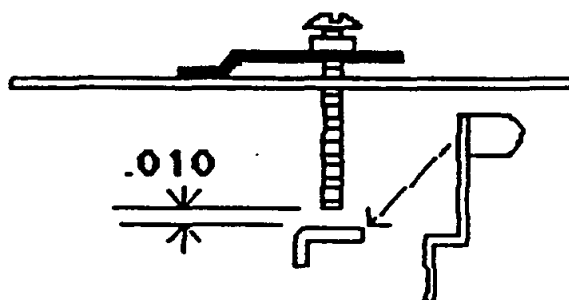


Figure 6 Factory Adjustment Screw

## PARTS DESCRIPTION

THE TOASTSWELL CO. 640 TOWER GROVE, ST. LOUIS. MO. 63110 TOASTER CAT. NO. BTM (CBT) (MINIMUM ORDER ... \$10.00) WHEN ORDERING PARTS. GIVE COMPLETE CAT. & SER. NO. & VOLTAGE 314-371-2732 FAX: 314-371-2700 IN USA TOLL FREE: 1-800-633-2608

### Parts List

FIG & PART NO	DESCRIPTION
MT5	CRUMB TRAY
MT9	SIDE BAFFLE
MT11	TERMINAL BOX COVER
MT15	TWO LEGS ON CRUMB TRAY GUIDE
MT20	BREAD SUPPORT (EACH)
MT21	120V ELEMENT FOR 120V, 230V BREAD TOASTER
MT21A	208V ELEMENT FOR BREAD TOASTER
MT21B	BUN ELEMENT FOR 120V, 230V, OR 208V
MT22	PLASTIC LEG (EACH )

## Parts List - Continued

<b>FIG &amp; PART NO</b>	<b>DESCRIPTION</b>
MT22A	LEG SCREW
MT26	GUIDE ROD
MT28	BUMPER SPRING
MT29	OILESS BUSHING
MT32A	GUARD WIRE ASSEMBLY
MT345	WINDING HANDLE AND SET SCREW
MT34C	WINDING HANDLE SPRING
MT35	CRUMB TRAY HANDLE (WITH 2 SCREWS )
MT37	ELEMENT CLAMP SCREW
MT38	ELEMENT CLAMP (EACH)
MT40	FLAT SPRING
MT42	PORCELAIN BUSHING FOR TERMINAL BLOCK & SIDE SPACER
MT42A	PLASTIC TERMINAL BOX OR BOARD W/STUDS
MT43	SWITCH SCREW & LOCK WASHER
MT62	SPRING LOCK
MT70	TIME ADJUSTOR KNOB
MT77	WEDGE AND ELEMENT HOLDER WITH WIRES
MT79	JUMPER
MT80	NUT, WASHER AND CUP WASHER
MT81	HEATER GUARD
MT82	4 CONTACTS ON FIBERGLASS, SHUNT & CONTACT
MT83	HEATER AND BIMETAL STRIP FOR BREAD TOASTER
MT83A	BUN HEATER AND BIMETAL STRIP FOR TOASTER
MT84	MAIN BRACKET WITHOUT #83, 87, 86, AND 82
MT85	TIMER SHAFT
MT86	FLAT FRICTION SPRING
MT87	RESET LEVER
MT88	TOP MAIN SWITCH COMPLETE
MT88A	BRACKET, 2 SCREWS, SPRING FOR SWITCH
MT89	WINDING MECH. TRIP CATCH, SPRING, BUSHING
MT90	POP UP SPRING
MT91	COIL SPRING FOR TRIP CATCH
MT92	BASKET & BREAD HOLDERS WITH OILESS BUSHING NO SWITCH
MT93	TIMER INCLUDING MT82, 83, 84, 86, 87, & 94
MT94	COIL SPRING FOR TRIP CATCH
MT95	CERAMIC INSULATOR

EFFECTIVE 10-10-88 PRINTED IN USA.

**NOTE**

WE ARE ORIGINAL MANUFACTURERS OF ALL COMPONENTS IN THIS  
TOASTER